

plurality of antenna systems **116** comprises a power transfer antenna and one or more communications antennas. The power transfer antenna is configured to enable wireless electrical power transfer between the power transfer antenna and at least one other power transfer antenna of another one of the plurality of antenna systems. Each of the one or more communications antennas is configured to enable wirelessly transmitting and receiving communications with at least one further communications antenna.

[0082] At step **1012**, a graphical user interface is provided. The graphical user interface can be provided by a group owner (group controller), one of the CE devices, a separate CE device, or a server. The graphical user interface is configured to illustrate each of the identified antenna systems **116** and communicational relationships between each of the identified antenna systems (for example, as shown in FIG. 9).

[0083] At step **1014**, user instructions are received through the graphical user interface. The user instructions correspond to at least two of the identified antenna systems **116**. In certain embodiments, the user instructions can include wireless coupling configurations dictating how at least one of the identified antenna systems is to wirelessly transfer power to at least one another of the identified antenna systems or how at least one of the identified antenna systems is to wirelessly transfer data to at least one other of the identified antenna systems. It should be understood that the user instructions are capable of configuring the power antennas and the user instructions are capable of configuring the data antennas, such that the instructions do not need to include both each time they are received.

[0084] At step **1016**, configuration instructions are generated in accordance with the wireless coupling configurations. The configuration instructions at least in part dictate which one or more of the plurality of antenna systems each antenna system is to directly communicate with and/or enable power transfer there between. Further, in some embodiments, the configuration instructions designate communications methods and/or protocols to be used (e.g., Wi-Fi, Bluetooth, via wireless USB, wireless Ethernet, power modulation (e.g., backscatter modulation), RFID communications or other such NFC, optical communication, HDMI, and/or other such communication methods or combinations of such protocols), which communications antenna of a plurality of communications antennas of an antenna system is to be used, a desired positioning and/or positional orientation of antenna system **116** and/or the CE device (which is typically dependent on an orientation of another antenna system to be communicated with), signal strength information defining a signal strength to be used in wirelessly transmitting relative to one or more communications antennas and/or communication protocols, encoding parameters, encryption parameters (e.g., encryption method, key, etc.), whether two antenna systems of a CE device are configured to operate as pass-through antenna systems, power transfer levels and/or rates, or other such information or combinations of such information.

[0085] At step **1018**, the configuration instructions are communicated to selected CE devices to direct each of the identified antenna systems to be configured in accordance with the configuration instructions. Further, the configuration instructions can be permanently or temporarily stored in a memory of at least one of the CE devices, group owner, server, and/or other devices. Further, each of the identified

antenna systems **116** is configured based at least in part on the received configuration instructions. After the identified antenna systems **116** are configured, there can be established wireless electrical power transfer between the power transfer antenna of one of the CE devices and the power transfer antenna of another CE device based at least in part on the configuration instructions. In addition, after the identified antenna systems **116** are configured, there can be provided wireless data transfer between at least one communications antenna of one of the CE devices and at least one communications antenna of another CE device based at least in part on the configuration instructions.

[0086] In certain embodiments, prior to wirelessly transferring data between the at least one communications antenna of one of the CE devices and the at least one communications antenna of another CE device, the data can be encrypted using any suitable encryption method such as a symmetric-key scheme or public-encryption scheme. After the data is wirelessly transferred between the at least one communications antenna of one of the CE devices and the at least one communications antenna of another CE device, the encrypted data can be decrypted or otherwise processed.

[0087] In additional embodiments, the configuration instructions can be retrieved from the memory anytime later on by any of the CE devices or by designated or predetermined devices with corresponding authorization. Further, the user can modify the manner of wireless power transfer and/or wireless data transfer using the same graphical user interface. Accordingly, modifying instructions corresponding to the at least two of the identified antenna systems can be received through the graphical user interface from the user. The modifying instructions can include modified wireless coupling configurations dictating how the at least one of the identified antenna systems is to wirelessly transfer power to at least one other of the identified antenna systems or how at least one of the identified antenna systems is to wirelessly transfer data to at least one other of the identified antenna systems. In this case, modified configuration instructions can be generated in accordance with the modified wireless coupling configurations. The modified configuration instructions are then communicated to the selected CE devices to direct each of the identified antenna systems to be configured in accordance with the modified configuration instructions.

[0088] Similarly, when there are changes in the near field wireless antenna caused by adding or removing one or more of CE devices, the selected CE devices can be automatically or manually reconfigured. For example, when at least one additional antenna system is identified, the user can provide, through the graphical user interface, additional user instructions corresponding to the at least one additional antenna system. The additional user instructions can include additional wireless coupling configurations dictating how the at least one additional antenna system is to wirelessly transfer power to at least one other of the identified antenna systems or how the at least one additional antenna system is to wirelessly transfer data to at least one other of the identified antenna systems. Further, additional configuration instructions are generated in accordance with the additional wireless coupling configurations, and then the additional configuration instructions are transmitted to the selected CE devices to direct each of the identified antenna systems to be configured in accordance with the additional configuration instructions.